

CLAIMS

1 An image compression encoding apparatus adapted for selecting, on encoding system selection basis, a first compression system or a second compression system having compression factor and loss which are lower than those of the first compression system to compression-encode an image signal,

the image compression encoding apparatus comprises: calculating means for adding, on encoding system selection basis, either code quantities obtained by the first compression system or code quantities obtained by the second compression system to thereby calculate total code quantity of the encoding system selection basis; selector means for selecting, on the encoding system selection basis, the first compression system or the second compression system on the basis of total code quantity calculated by the calculating means and target code quantity in equi-length unit; and compression encoding means for compression-encoding image signals of the respective encoding system selection bases by using the compression system selected by the selector means.

2 The image compression encoding apparatus as set forth in claim 1, wherein the first compression system and/or the second compression system are a system of respectively quantizing the image signal by plural different quantization steps,

the image compression encoding apparatus further comprises

determination means for comparing the total code quantity calculated by the calculating means and the target code quantity in the equi-length unit to determine quantization step at the first compression system in accordance with the comparison result,

wherein the selector means selects, on the encoding system selection basis, either one of the first compression system and the second compression system of performing quantization by the quantization step determined by the determination means.

3 The image compression encoding apparatus as set forth in claim 1,
wherein the selector means selects the first compression system or the second compression system on the basis of a predetermined priority.

4 The image compression encoding apparatus as set forth in claim 3,
wherein the selector means selects either one of the first compression system and the second compression system in the case where priority of the first compression system and priority of the second compression system are equal to each other.

5 The image compression encoding apparatus as set forth in claim 3,
wherein the selector means preferentially selects the second compression system.

6 The image compression encoding apparatus as set forth in claim 1,
wherein the first compression system is a system of performing DCT

(Discrete Cosine Transform) of the image signal to quantize the image signal which has been caused to undergo DCT.

7 The image compression encoding apparatus as set forth in claim 1, wherein the second compression system is reversible encoding

(Lossless) system.

8 The image compression encoding apparatus as set forth in claim 7, wherein the second compression system is a system of encoding the

image signal by DPCM (Differential Pulse Code Modulation).

9 The image compression encoding apparatus as set forth in claim 1, wherein the calculating means adds, on the encoding system selection basis, smaller one of code quantities obtained by the first compression system and code quantities obtained by the second compression system.

10 An image compression encoding method of selecting, on encoding system selection basis, a first compression system or a second compression system having compression factor and loss which are lower than those of the first compression system to compression-encode an image signal,

the image compression encoding method including a calculation step of adding, on the encoding system selection basis, either code quantities obtained by the first compression system or code quantities obtained by the second compression system to thereby calculate total code quantity of the encoding system selection basis; a selection step of selecting, on the encoding

system selection basis, the first compression system or the second compression system on the basis of the total code quantity calculated at the calculation step and target code quantity in the equi-length unit; and a compression encoding step of compression-encoding image signals of the respective encoding system selection bases by using the compression system selected at the selection step.

11 The image compression encoding method as set forth in claim 10,

wherein the first compression system and/or the second compression system are a system of quantizing the image signal by plural quantization steps different from each other, the image compression encoding method further comprising a determination step of comparing the calculated total code quantity and the target code quantity of the equi-length unit to determine quantization step in the first compression system in accordance with the comparison result,

wherein, at the selection step, the first compression system or the second compression system is selected on the encoding system selection basis by quantization step determined at the determination step.

12 The image compression encoding method as set forth in claim 10,

wherein, at the selection step, the first compression system or the second compression system is selected on the basis of a predetermined priority.

13 The image compression encoding method as set forth in claim 12, wherein, at the selection step, in the case where priority of the first compression system and priority of the second compression system are equal to each other, either one of the first compression system and the second compression system is selected.

14 The image compression encoding method as set forth in claim 12, wherein, at the selection step, the second compression system is preferentially selected.

15 The image compression encoding method as set forth in claim 10, wherein the first compression system is a system of performing DCT (Discrete Cosine Transform) of the image signal to quantize the image signal which has been caused to undergo DCT.

16 The image compression encoding method as set forth in claim 10, wherein the second compression system is a system of performing encoding by the reversible encoding (Lossless) system.

17 The image compression encoding method as set forth in claim 16, wherein the second compression system is a system of encoding an input image signal by DPCM (Differential Pulse Code Modulation).

18 The image compression encoding method as set forth in claim 10, wherein, at the calculation step, smaller ones of code quantities obtained by the first compression system and code quantities obtained by the

second compression system are added on the encoding system selection basis so that total code quantity of equi-length unit is calculated.

19 A program for allowing computer to execute a processing to select, on encoding system selection basis, a first compression system or a second compression system having compression factor and loss which are lower than those of the first compression system to compression-encode an image signal,

wherein the program allows the computer to add, on the encoding system selection basis, either code quantities obtained by the first compression system or code quantities obtained by the second compression system to thereby calculate total code quantity of the encoding system selection basis to select, on the encoding system selection basis, the first compression system or the second compression system on the basis of calculated total code quantity and target code quantity in the equi-length unit to compression-encode image signals of the respective encoding system selection basis by using the selected compression system.